CD RECEIVER

DC cord

Escutcheon

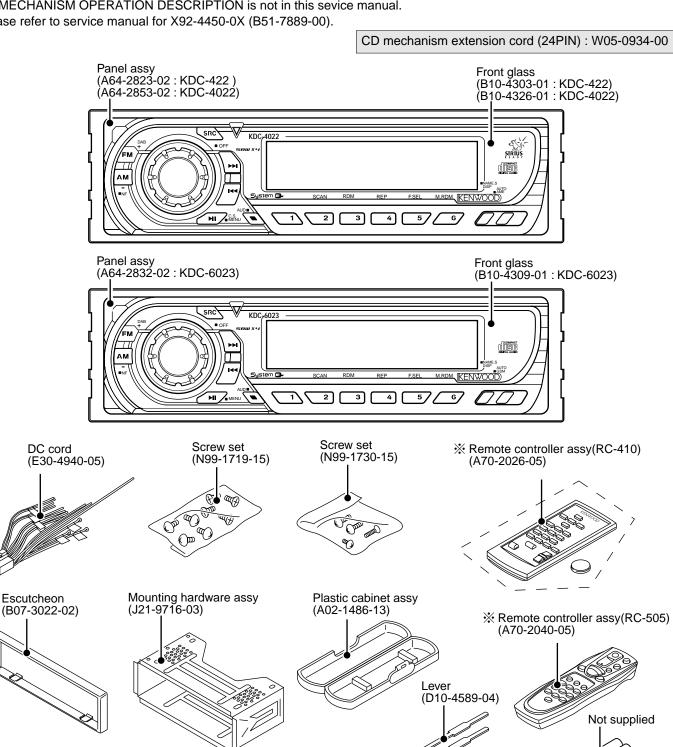
*Depends on model. Refer to the parts list.

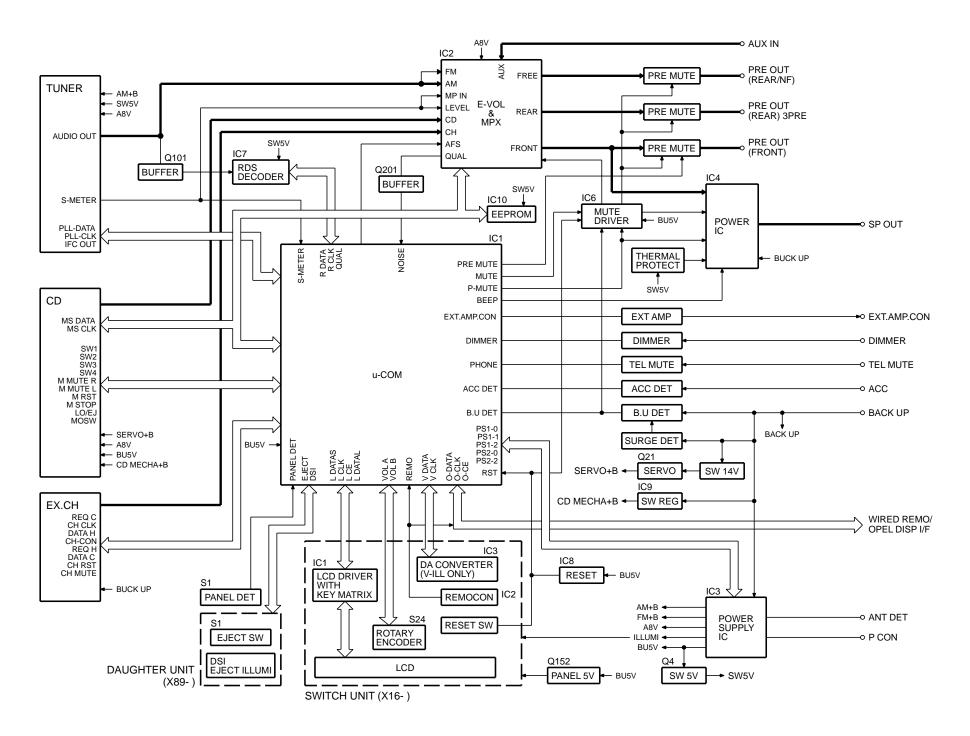
KDC-4022 KDC-422 KDC-6023 SERVICE MANUAL

KENWOO

© 2003-1 PRINTED IN JAPAN B53-0023-00 (N) 1724

•CD MECHANISM OPERATION DESCRIPTION is not in this sevice manual. Please refer to service manual for X92-4450-0X (B51-7889-00).





COMPONENTS DESCRIPTION

● CD PLAYER UNIT (X32-5400-00)

| Ref.No. | Component Name | Application/Functions | Operation/Condition/Compatibility | |
|---------|----------------|-------------------------------------|---------------------------------------------------------------------------|--|
| IC1 | AN22002AA | RF amplifier adapted for CD-RW | Generation of RF signal based on the signals from the APC circuit and | |
| | | | pickup, and generation of servo error (focusing error and tracking error) | |
| | | | signals. Detection of dropout, anti-shock, track crossing and off-track | |
| | | | conditions, included gain control function during CD-RW. | |
| IC2 | MN6627771KP | CD signal processor built-in MI-COM | Focusing, tracking, sled and spindle servo processing. Automatic | |
| | | | adjustment (focusing, tracking, gain, offset and balance) operations. | |
| | | | Digital signal processing (DSP, PLL, sub-codes, CIRC error correction, | |
| | | | audio data Interpol ration) operations, and Microcomputer function. | |
| IC3 | BA5824FP | 4CH BTL driver | Focusing coil, tracking coil, spindle motor and sled motor driver, disc | |
| | | | loading and eject operation. | |
| IC4 | NJM4580M1 | Low pass filter | 2nd low pass filter for audio signals. | |
| Q1 | MCH6101 | APC | LD power control. | |
| Q2 | 2SA1362(Y) | D.5V SW | When P ON signal gose"L", Q2 is ON. | |
| Q3 | DTC124EUA | Q4 SW | When P ON signal gose"L" (SW+5V AVR is ON), Q3 is ON. | |
| Q4 | DTA143XUA | A.8V SW | When P ON signal gose"L" (Q3 is ON), Q4 is ON. | |
| Q5 | 2SC4081 | Current driver | Current driver. | |
| Q6 | 2SA1576A | Current driver | Current driver. | |
| D1 | DAN202U | Protection diode | Laser diode protection. | |
| D2 | MA8051-L | Zener diode | DAC AVR/LPF reference voltage (A.5V). | |
| D3 | DA204U | Current driver | Current driver. | |

● ELECTRIC UNIT (X25-9800-11/12/21)

| Ref.No. | Component Name | Application/Functions | Operation/Condition/Compatibility | | |
|---------|----------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| IC1 | UPD703030GC013 | System microcomputer | Control for TUNER unit, CD mechanism, volume & tone, LCD driver and | | |
| | | | external CD changer unit | | |
| IC2 | TDA7411 | Electronic volume & N.C.MPX | Control for source selector, volume & tone, and FM multiplex detector. | | |
| IC3 | BA4911-V4 | Power supply IC | Power supply for the units (Bu5V, Audio8V, FM+B, AM+B, P-con and ANT-con). SW1 OUT 1.5-3.0V Audio ON 3.5-5.0V Audio, P-con ON 7.0V Audio, P-con, P-ant ON SW2 2.0-3.0V Illumination, FM ON 4.0V Illumination, AM ON | | |
| IC4 | TA8273H | Audio power amp IC | Amplifier for audio signal to derive for 4channel speakers (50W maximum for each channel). | | |
| IC6 | HD74HC27FP | Muting control IC | Control for timing for mute. | | |
| IC8 | PST3436UL | Reset IC | When detection voltage goes below 3.5V or less Reset IC output change to "L" signal. | | |
| Q1 | 2SC4081 | Serge detection | When backup voltage become more than 24V output is "L" (momentary power down) / When backup voltage become less than 24V output is "H". | | |
| Q2 | 2SC4081 | Backup detection | When BU voltage supplied output is "L" / When BU voltage not supplied | | |
| | | | or momentary power down is detected output is "H". | | |
| Q3 | 2SC4081 | ACC detection | When ACC voltage supplied output is "L". | | |
| Q4 | 2SA1036K | SW 5V | When base voltage is "L" Q4 is ON. | | |
| Q21 | 2SD2375 | AVR | Servo regulator. | | |
| Q22 | UMC2N | SW | Servo SW. | | |
| Q23 | UMC2N | IC control | Power supply IC controller. | | |
| Q31 | UN5213 | Dimmer control | When base voltage is "H" dimmer is ON. | | |

COMPONENTS DESCRIPTION

| Ref.No. | Component Name | Application/Functions | Operation/Condition/Compatibility | |
|---------|----------------|-----------------------|---------------------------------------------------------------------------|--|
| Q151 | UN5114 | DSI driver | When base voltage level is "L" DSI LED is light up / When base voltage | |
| | | | level is "H" DSI LED turns off / When panel assy is pull off, cut off the | |
| | | | supply to panel 5V AVR. | |
| Q152 | 2SA1576A | Panel 5V SW | When panel assy attached to the unit, Q152 base goes "L" and supply to | |
| | | | panel 5V AVR to panel assy . | |
| Q153 | UN5213 | Illumination control | When Q153 base voltage to "H", illumination is light up. | |
| Q154 | 2SA1577 | Illumination control | When Q153 base voltage to "H", illumination is light up. | |
| Q201 | UN5216 | Buffer amp | Noise buffer amp. | |
| Q350 | UN5112 | Pre & NF mute SW | When base voltage to "L", drive to pre & NF mute SW(Q351,355,357). | |
| Q351 | UN5216 | Pre mute SW | When base voltage to "H", muting to the pre Lch or NF Lch line. | |
| Q352 | UN5216 | Pre mute SW | When base voltage to "H", muting to the pre Rch or NF Rch line. | |
| Q354 | UN5112 | Pre & NF mute SW | When base voltage to "L", drive to pre & NF mute SW(Q32,356,358). | |
| Q355 | UN5216 | Pre mute SW | When base voltage to "H", muting to the front Lch line. | |
| Q356 | UN5216 | Pre mute SW | When base voltage to "H", muting to the front Rch line. | |

● SWITCH UNIT (X16-2020-10/12)

| Ref.No. | Component Name | Application/Functions | s Operation/Condition/Compatibility | |
|---------|----------------|-----------------------|------------------------------------------------------------------------|--|
| IC1 | LC75808W | LCD driver | Drive for LCD unit. | |
| IC2 | PNA4S22M | Remote control IC | Receiving for the remote control unit. | |
| Q1 | 2SC4081 | VLCD AVR | When base voltage level goes 7.9V Q1 is ON. | |
| Q2 | DTA114EUA | Remo. ON SW | When base voltage level goes "L" the power supply IC2 is turned "ON". | |
| Q3 | 2SC4081 | key illumination SW | Lights up for green key illumination when base voltage level goes "H". | |
| Q4 | 2SC4081 | key illumination SW | Lights up for red key illumination when base voltage level goes "H". | |
| Q5 | 2SC4081 | Dimmer control SW | Lights up for LCD back light when base voltage level goes "H". | |

MICROCOMPUTER'S TERMINAL DESCRIPTION

● IC1: ELECTORIC UNIT (X25-9800-11/12/21)

| Pin No. | Name | 1/0 | Description/Processing Operation |
|---------|------------|--------|--------------------------------------------------------------------------|
| 1 | PLL CLK | 0 | CLK output terminal to Front End |
| 2 | N.C | - | Open |
| 3 | PANEL DET | ı | Panel assy detect terminal (Panel assy come off : L) |
| 4 | IC2 SDA | I/O | Control Data input / output terminal for electric volume, CD mechanism |
| 5 | IC2 SCL | 0 | Clock DATA output terminal for electric volume, CD mechanism |
| 6 | VDD | - | Power supply input terminal (BU 5V) |
| 7 | VSS | - | GND |
| 8 | FLIP-DET | ı | Panel assy open detect terminal (panel close : L) |
| 9 | BEEP | 0 | Beep audio signal output terminal |
| 10 | REMO | ı | Remote control signal input terminal |
| 11 | R QUAL | ı | RDS decoder QUAL signal input terminal |
| 12 | R DATA | ı | RDS decoder Data signal input terminal |
| 13 | L CE | 0 | CE output for LCD driver IC |
| 14 | VILL DATA | 0 | Variable illumination DATA out put terminal for D/A converter |
| 15 | VILL CLK | 0 | Valuable illumination CLK out put terminal for D/A converter |
| 16 | DSI | 0 | Disc guide illumination control terminal |
| 17 | DIM CON | 0 | Dimmer control terminal |
| 18 | TEST | - | Test terminal |
| 19 | ILL CON | 0 | Illumination control terminal |
| 20 | VOL A | Ī | Volume key input terminal |
| 21 | VOL B | i | Volume key input terminal |
| 22 | MOSW | 0 | CD mechanism motor IC control output terminal (Loading,eject ,brake :L) |
| 23 | LO/EJ | 0 | CD mechanism loading / eject control terminal |
| 24 | M STOP | 0 | Request signal (Mechanism is STOP) output to CD mechanism (active L) |
| 25 | M RST | 0 | Reset signal output to CD mechanism (active L) |
| 26 | MUTE | 0 | Muting signal output terminal |
| 27 | LOE/LIM SW | I | Down SW detection from CD mechanism |
| 28 | M-MUTE L | ' ' | Request for muting signal from CD mechanism (Mute request : L) |
| 29 | M-MUTE R | ' ' | Request for muting signal from CD mechanism (Mute request : L) |
| 30 | PANEL 5V | 0 | Control for Panel5V AVR |
| 31 | RESET | - | Reset terminal (Active : L) |
| 32 | XT1 | I | Sub clock input terminal (32.768KHz) |
| 33 | XT2 | 1 | Sub clock input terminal (32.768KHz) |
| | | ! | , |
| 34 | REGC | - | Regulator output terminal |
| 35 | X2 X1 | | Main clock input terminal (20MHz) Main clock input terminal (20MHz) |
| 36 | VSS | I | GND |
| 37 | VDD | - | |
| 38 | NC NC | - | Power supply input terminal (BU 5V) |
| 39 | | - | Open |
| 40 | IC2 TYPE1 | | Electric volume condition setting terminal |
| 41 | IC2 TYPE0 | | Electric volume condition setting terminal |
| 42 | TYPE2 | I | Destination setting terminal |
| 43 | TYPE1 | I | Destination setting terminal |
| 44 | TYPE0 | 1 | Destination setting terminal |
| 45 | CD MECHA+B | 0 | AVR control for CD mechanism (For MP3 AVR ON :L) |
| 46 | SW 5V | 0 | Control terminal for SW5V AVR (ON : L , OFF : Hi-Z) |
| 47 | PS2-0 | 0 | Power supply IC control terminal |
| 48 | PS2-1 | 0 | Power supply IC control terminal |
| 49 | PS1-0 | 0 | Power supply IC control terminal |
| 50 | PS1-1 | 0 | Power supply IC control terminal |

MICROCOMPUTER'S TERMINAL DESCRIPTION

| Pin No. | Name | I/O | Description/Processing Operation |
|---------|-------------|-----|-----------------------------------------------------------------|
| 51 | PS1-2 | 0 | Power supply IC control terminal |
| 52 | B.U-DET | ı | BU detect input terminal (BU detect : L) |
| 53 | ACC-DET | I | ACC detection input terminal (ACC detect : L) |
| 54 | DIMMER | ı | Illumination detect terminal from CAR (illumination ON : L) |
| 55 | BVDD | - | Power supply input terminal (BU 5V) |
| 56 | BVSS | - | Open |
| 57 | EXT AMP CON | 0 | EXT. amp control terminal (Active H) |
| 58 | SVR | 0 | SVR control for Audio power IC |
| 59 | P-MUTE | 0 | Muting control for Audio power IC |
| 60 | P-STBY | 0 | STBY control for Audio power IC (Power IC ON : H) |
| 61 | NC | - | Open |
| 62 | PRE MUTE R | 0 | Rch pre mute output terminal (Active H) |
| 63 | PRE MUTE L | 0 | Lch pre mute output terminal (Active H) |
| 64 | TUNER | 0 | Noise detection (FM seek,AM search : L) |
| 65 | O-DATA | 0 | DATA signal output for EXT. display (Handling for OPEL display) |
| 66 | O-CLK | 0 | CLK signal output for EXT. display (Handling for OPEL display) |
| 67 | O-CE | 0 | CE signal output for EXT. display (Handling for OPEL display) |
| 68 | LX-RST | 0 | Reset signal output to EXT. unit |
| 69 | LX-CON | 0 | Control signal output to EXT. unit (ON: H, OFF: L) |
| 70 | AVCONT | 0 | Control for A/D reference voltage |
| 71 | AVDD | - | Power supply input terminal (BU 5V) |
| 72 | AVSS | - | Open |
| 73 | AVREF | I | A/Dereference voltage input terminal |
| 74 | PHONE | ı | Mobil phone detection input terminal |
| 75~81 | NC | - | GND |
| 82 | S-METER | I | S meter detection input terminal |
| 83 | NOISE | I | FM noise detection input terminal |
| 84 | IFC-OUT | ı | IFC OUT input terminal |
| 85 | LX-MUTE | ı | Request signal input terminal from EXT.unit (Mute ON : L) |
| 86 | LX-REQ-M | 0 | Request signal output terminal to EXT.unit (Request : L) |
| 87 | R-CLK | | RDS decoder CLK input terminal |
| 88 | LX-REQ-S | | Request signal input terminal from EXT.unit (Request : L) |
| 89 | KEY-REQ | | Request for communicate from LCD driver IC (KEY input : L) |
| 90 | LO.S SW | I | Loading start SW detection input terminal (Loading start : L) |
| 91 | 12EJE SW | | 12cm CD disc eject SW detection input terminal (12cm disc : L) |
| 92 | EJECT | I | Eject detection terminal (KEY input : L) |
| 93 | 8EJE SW | I | 8cm CD disc eject SW detection input terminal (Not used) |
| 94 | LX-DATA-S | Ī | DATA signal input from EXT. unit |
| 95 | LX-DATA-M | 0 | DATA signal output to EXT. unit |
| 96 | LX-CLK | I/O | CLK signal input/output to EXT. unit |
| 97 | L DATAL | I | DATA input terminal from LCD deriver IC |
| 98 | L DATAS | 0 | DATA output terminal to LCD driver IC |
| 99 | L CLK | 0 | CLK output terminal to LCD driver IC |
| 100 | PLL DATA | I/O | Data input / out put terminal to Front-end |

KDC-4022/422/6023 TEST MODE

1. How to enter the test mode

• While holding the preset 1 key and 3 keys, reset the unit.

2. How to exit from the test mode

 Reset the unit, ACC OFF, power OFF, and come off the front panel assy for the unit.

3. Initial status in the test mode

• Sources : All OFF.

Display : All segments were lit.Volume : -10 dB (displayed as 30)

• Loudness : OFF

•CRSC : OFF regardless of the presence of

switching function.

SYSTEM Q : Flat.Aux : ON

• Display color : white (variable color display model only)

• Beep sound : ON

4. Special display in Tuner mode

When any of the following messages is displayed in Tuner mode, the Front-end (F/E) may be bad condition.

- "TNE2P NG": The EEPROM is set to the default (unstable values) because the F/E was shipped without passing through the adjustment process, etc.
- "TNCON NG": Communication with the F/E to microprocessor is not possible.

5. Forced switching of K3I

Each press of the Preset 6 key in Tuner mode should switch K3I from AUTO → Forced Wide → Forced Middle → Forced Narrow → AUTO. The initial status is AUTO and the display shows these modes as follows.

• AUTO : FMA

Forced Wide : FMWForced Middle : FMMForced Narrow : FMN

6. Test mode specifications of the CD receiver

- Forced ejection is inhibited in the reset start operation.
 When the unit is reset while a CD is loaded in it, the CD is not recognized by resetting.
- Each press of the Track Up key jumps to the following track numbers:

No. 9 \rightarrow No. 15 \rightarrow No. 10 \rightarrow No. 11 \rightarrow No. 12 \rightarrow No. 13 \rightarrow No. 22 \rightarrow No. 14 \rightarrow No. 9 (The cycle restarts from here.)

 Each press of the Track Down key jumps to the previous track number to the track being played.

- When the number of total tracks of an MP3 disc is nine or less, unit playback from a track 1.
- When the media to CD-DA, unit playback from track No.28 by key operation of preset 1 key.

7. Audio-related specifications

- A short press of the Q key initiates the audio adjustment mode.
- Pressing the * key on the remote initiates the audio adiustment mode.
- Continuous holding of a remote control key is inhibited.
- Bass, Middle and Treble are adjusted in 3 steps of -8 / 0 / +8 with the Track Up/down keys (default is 0).
- Balance is adjusted in 3 steps of Left L15 / 0 / R15 Max with the Track Up/down keys (default is 0).
- Fader is adjusted in 3 steps of Rear15 / 0 / F15 Max with the Track Up/down keys (default is 0).
- HPF is adjusted in 2 steps of Through/170Hz (or 200Hz) with the Track Up/down keys (default is through).
- LPF is adjusted in 2 steps of Through/120Hz with the Track Up/down keys (default is through).
- Bass f, Bass Q, Bass EXT, Middle f, Middle Q and Treble f are not dealt with by the audio adjustment.

8. Menu-related specifications

- A short press of the PLAY/PAUSE key initiates the Menu mode.
- Pressing the DNPP key on the remote initiates the Menu mode.
- Continuous holding of a remote control key is inhibited.
- Contrast is adjusted press of the Track up/down key in 3 steps of 0 / 5 / 10 (default is 5).

9. Backup current measurement

When the unit is reset while ACC is OFF (i.e. by turning Backup ON), the MUTE terminal goes OFF in 2 seconds in place of 15 second. (The CD mechanism is not activated at this time.)

TEST MODE

10. Special display when the display is all on

Pressing the Preset keys while the power is ALL OFF displays the following information.

| PRESET 1 | Version display (8 digits, Month/Day/Hour/Minute) | | | |
|----------|---------------------------------------------------|--|--|--|
| | (Display) SYS xxxxxxxx | | | |
| PRESET 2 | Serial No. display (8 digits) | | | |
| | (Display) S. No. xxxxxxxx | | | |
| PRESET 3 | Short press: View power ON time. | | | |
| | (The All OFF period is not counted.) | | | |
| | Long press/hold: Clear power ON time. | | | |
| | (Display) PonTim xxxxx Max. 60,000 (hours) | | | |
| PRESET 4 | Short press: Display CD operation time. | | | |
| | Long press/hold: Clear CD operation time | | | |
| | (Display) CDTime xxxxx Max. 60,000 (hours) | | | |
| PRESET 5 | Short press: Display CD ejection count. | | | |
| | Long press/hold: Clear CD ejection count. | | | |
| | (Display) EjeTim xxxxx Max. 60,000 (times) | | | |
| PRESET 6 | Short press: Display Panel open/close count. | | | |
| | Long press/hold: Clear Panel open/close count. | | | |
| | (Display) PnCnt xxxxx Max. 60,000 (times) | | | |
| FM | ROM correction version information | | | |
| | (Display) ROM Rxxxx | | | |
| | If not mounting ROM correction chip set display | | | |
| | shows ROM R_ | | | |

11. Change the condition of TUNER channel space selection (K/M type only)

While holding the preset 1 key and 5 keys, reset the unit.

Security-related information

1. Forced Power ON mode (All models)

Even when the security is approved, resetting the unit while holding the Q and Preset 4 keys makes it possible to turn the power ON for 30 minutes.

After 30 minutes have elapsed, it is not possible to return to the previous condition unless the unit is reset again.

2. Method of registration of the security code after EEPROM (Tuner unit assy) replacement (Code security model)

- 1. Enter the test mode. (See 1. How to enter the test mode)
- 2. Press the MENU key to enter the MENU mode.
- Press and hold down the Track up/down key for 1 second until "Security" is displayed.
- 4. Enter the code using the FM/AM/TARCK up/down keys.
 - FM key: number is up
 - AM key: number is dawn
 - Track up key: move the cursor for right side
 - Track down key: move the cursor for left side

- 5. Hold down the Track up key for at least 3 seconds and the message, "RE-ENTER" appears, so once again enter the code according to Step 3 above.
- 6. Press and hold the Track up key for 3 seconds until "APPROVED" is displayed.
- Exit from the test mode. (See 2. How to exit from the test mode)
 (Note) All Clear is not applicable to the security code of this model.

3. Simplified method of clearing the security code (K, E Type only)

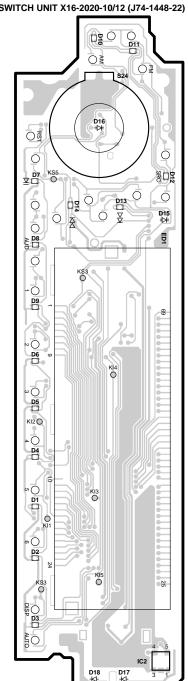
- 1. While the code entry is requested, press and hold the TRACK UP key for 3 seconds while holding the DISP key pressed. (This should turn "----" off.)
- 2. Enter "KCAR "from the remote.
 - Press the 5 key on the remote twice, and then press the Track Up key. (This enters "K".)
 - Press the 2 key on the remote 3 times, and then press the Track Up key. (This enters "C".)
 - Press the 2 key on the remote once, and then press the Track Up key. (This enters "A".)
 - Press the 7 key on the remote twice, and then press the Track Up key. (This enters "R".)
- The security code is cleared and the unit enters the ALL OFF mode.
- 4. If you commit a mistake in the code entry, the unit enters the code request mode again.

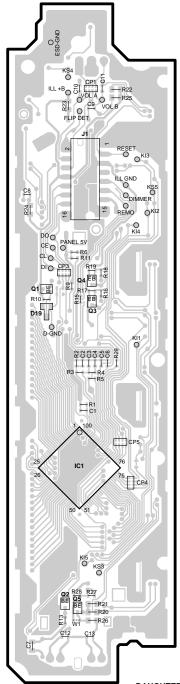
D

PC BOARD

(COMPONENT SIDE VIEW) (FOIL SIDE VIEW) SWITCH UNIT X16-2020-10/12 (J74-1448-22) SWITCH UNIT X16-2020-10/12 (J74-1448-22)

В





| X16-2020-10/12 | | | | |
|----------------|--|--|--|--|
| address | | | | |
| 4C | | | | |
| 6B | | | | |
| 3C | | | | |
| 5C | | | | |
| 3C | | | | |
| 3C | | | | |
| 5C | | | | |
| | | | | |

DAUGHTER UNIT
X89-2570-10 (J74-1450-02)

R2
R2
R4
R4
R4
R4
R4
R8

DAUGHTER UNIT X89-2570-10 (J74-1450-02)

| '

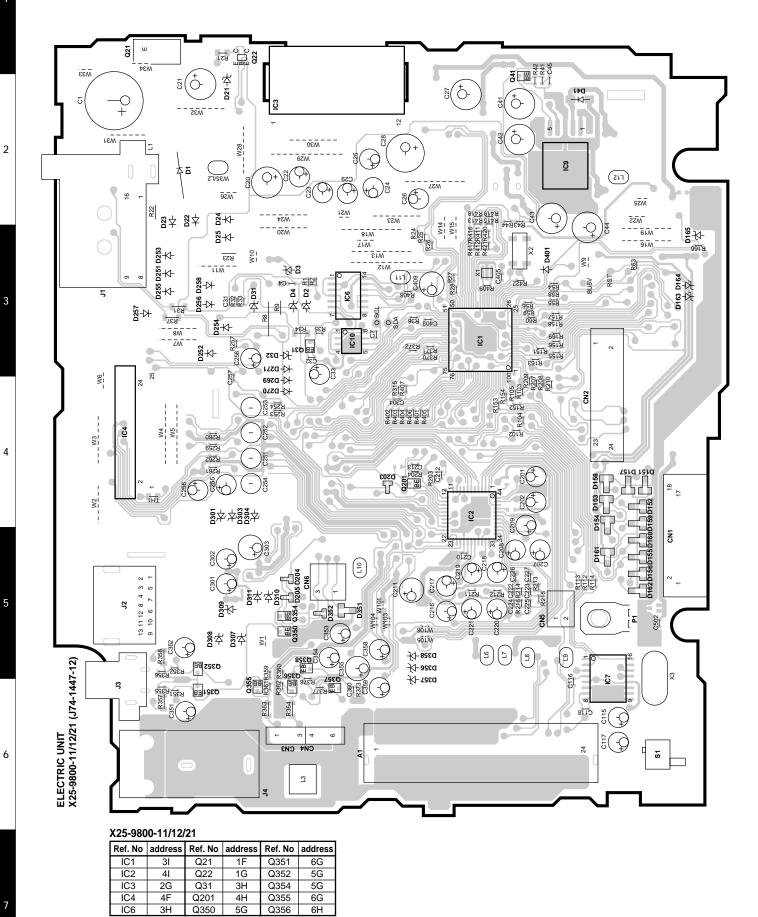
9

3

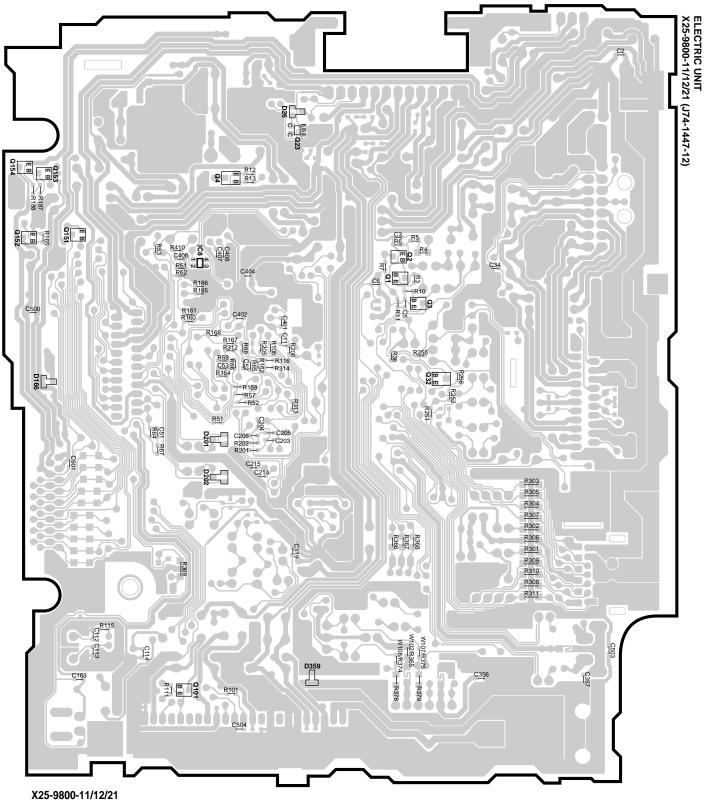
F

PC BOARD (COMPONENT SIDE VIEW)

Н



PC BOARD (FOIL SIDE VIEW)



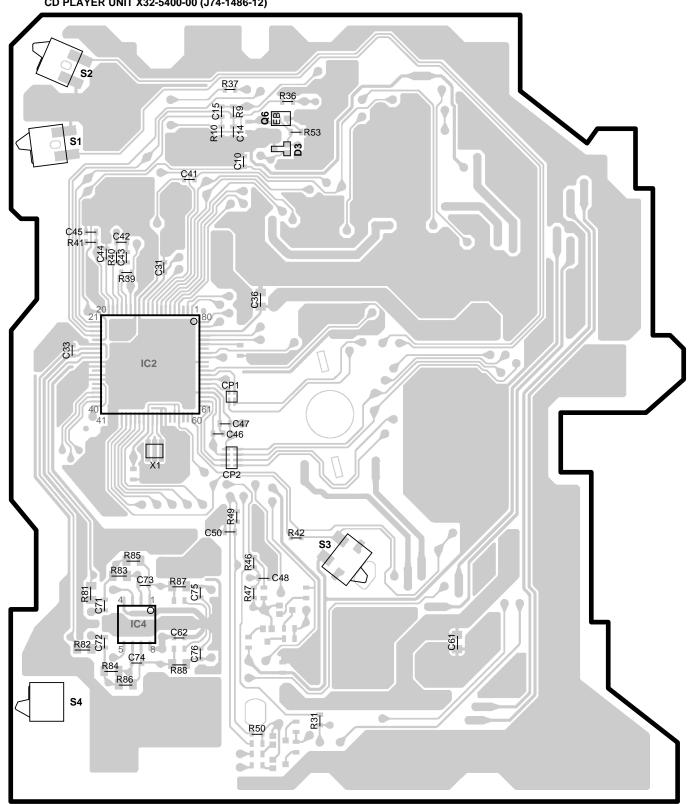
Pof No address Ref. No address

| Rei. No | address | Rei. No | address |
|---------|---------|---------|---------|
| IC8 | 3L | Q23 | 2M |
| Q1 | 3M | Q151 | 3K |
| Q2 | 3M | Q152 | 3K |
| Q3 | 3M | Q153 | 2K |
| Q4 | 2L | Q154 | 2K |

R Т

KDC-4022/422/6023 PC BOARD (COMPONENT SIDE VIEW)

CD PLAYER UNIT X32-5400-00 (J74-1486-12)

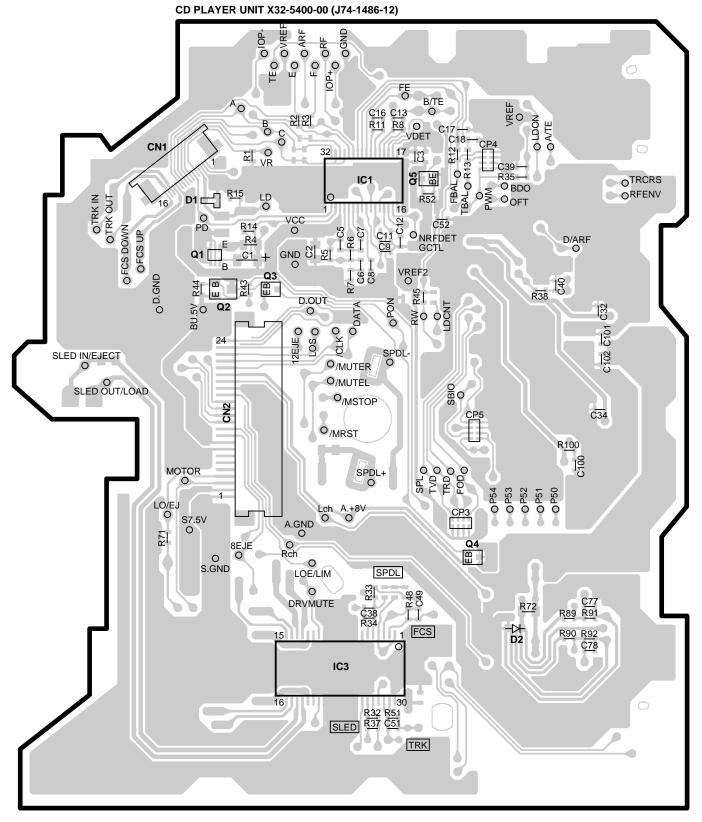


X32-5400-00

| Ref. No | address |
|---------|---------|
| IC2 | 4Q |
| IC4 | 5Q |
| Q6 | 2R |

Χ

PC BOARD (FOIL SIDE VIEW)



W

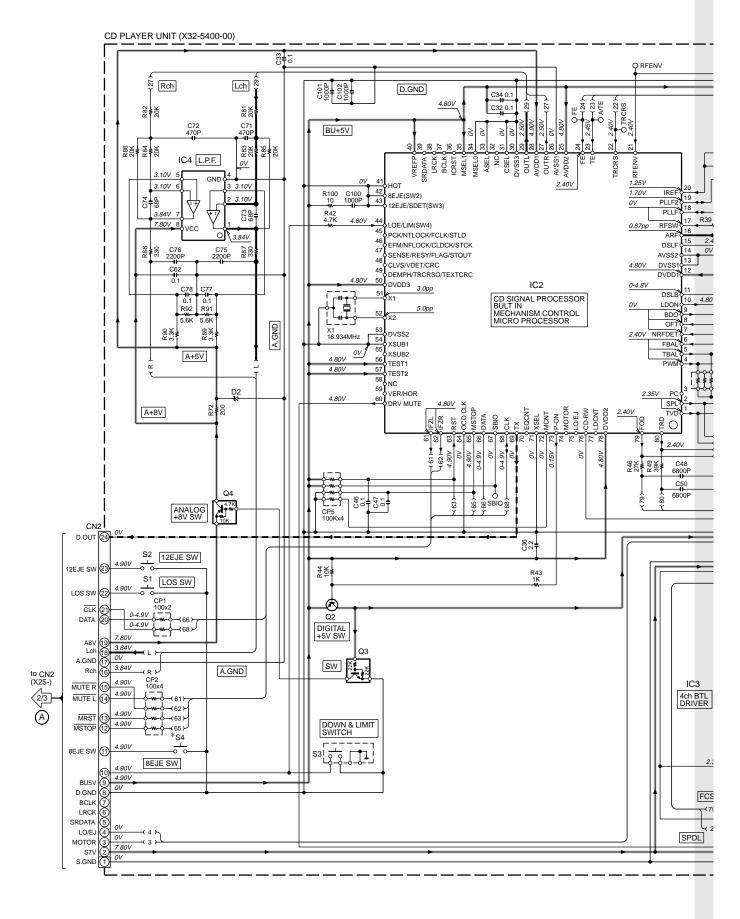
X32-5400-00

| Ref. No | address | Ref. No | address |
|---------|---------|---------|---------|
| IC1 | 2W | Q4 | 5X |
| IC3 | 6W | Q5 | 2W |
| Q1 | 3V | | |
| Q2 | 3V | | |
| Q3 | 3V | | |

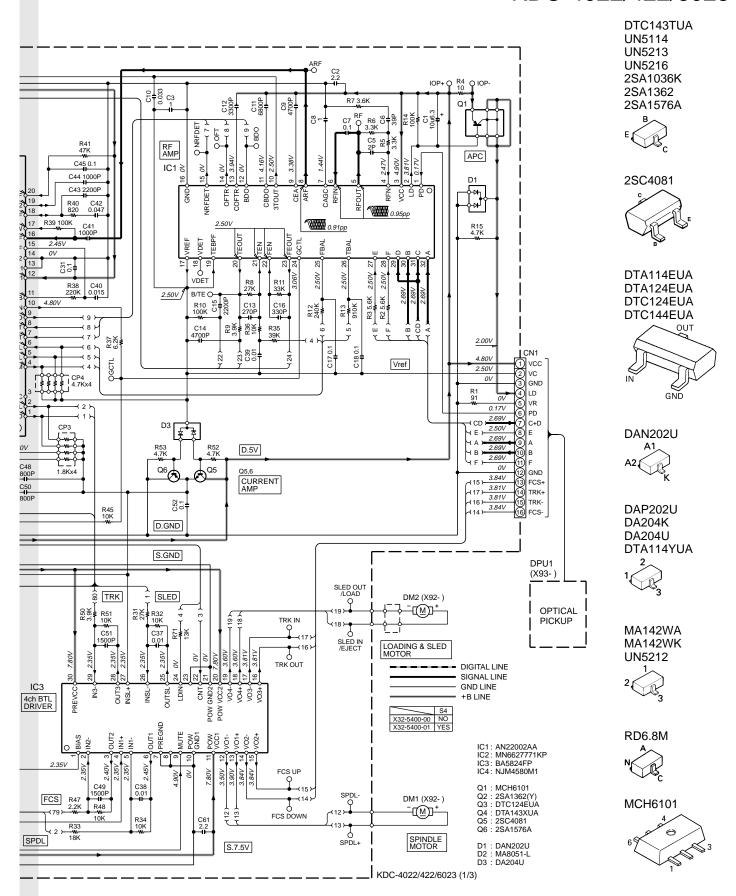
13

3

2



14

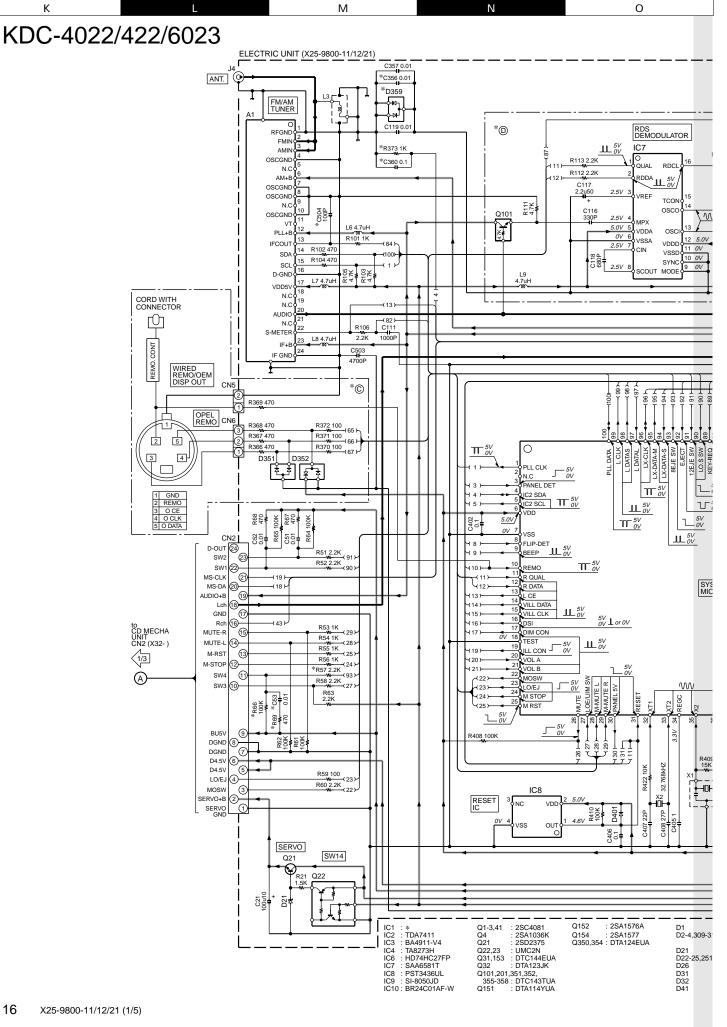


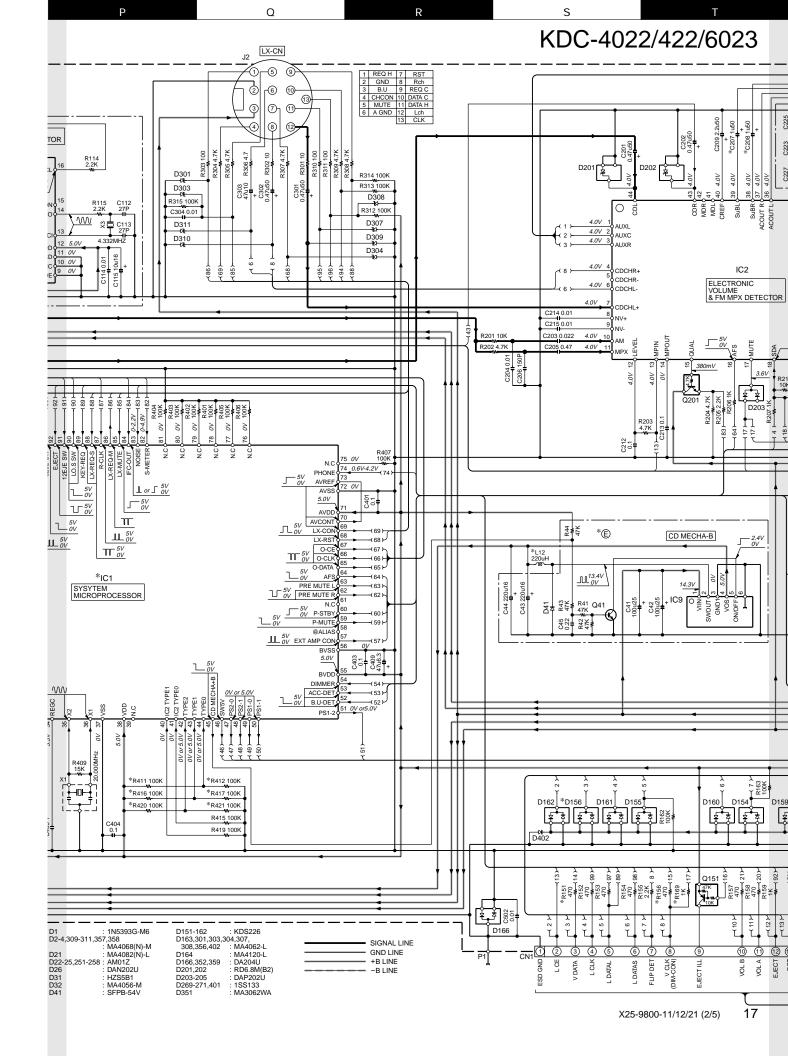
G

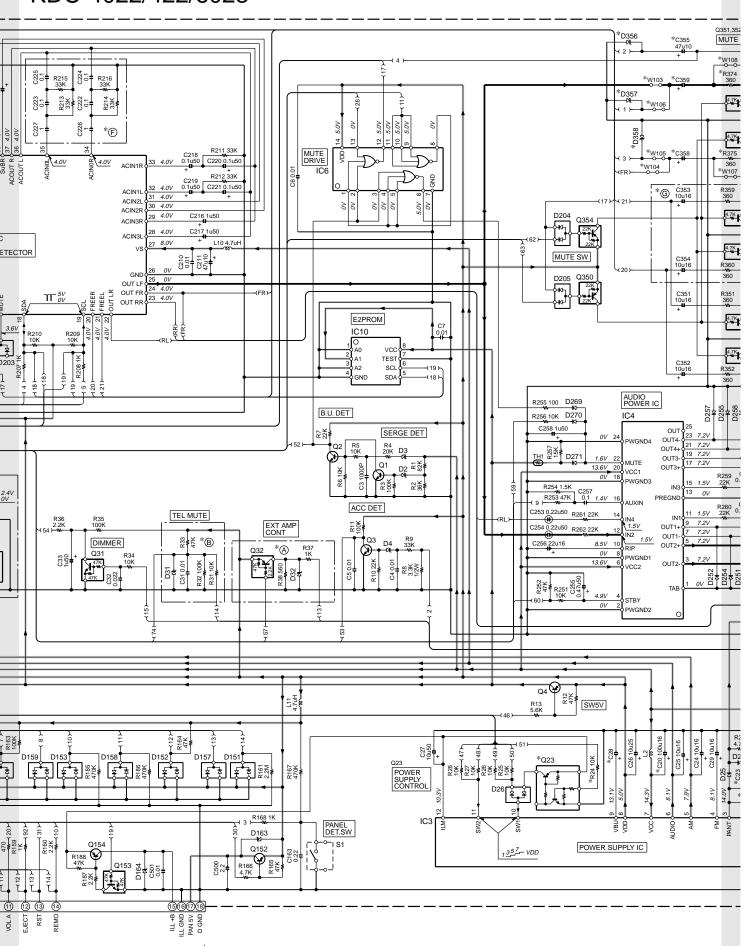
 $extbf{CAUTION}$: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). $extit{$\triangle$}$ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

3

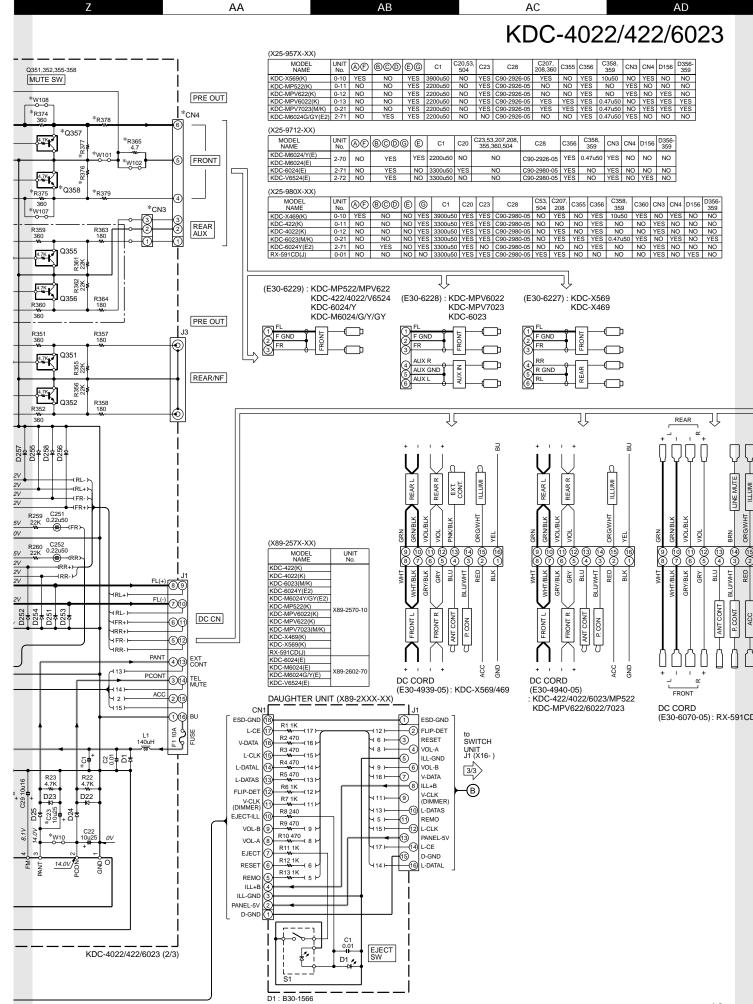






W

Υ



| MODEL NAME | IC1 | L12 | Q23 | Q357, 358 | R24 | R57, 66,69 | R151, 156,416 | R169, 417 | R365, 373 | R374, 375 | R376, 377 | R378, 379 | R411 | R412 | R420 | R421 | W10 | W101- 104 | W105- 108 |
|-------------------|----------------|-----|-----|--------------|-----|---------------|------------------|--------------|--------------|--------------|--------------|--------------|------|------|------|------|-----|--------------|--------------|
| KDC-X569(K) | UPD703030GC012 | NO | YES | YES | YES | NO | NO | YES | NO | 360 | 22K | 180 | NO | YES | NO | YES | NO | YES | NO |
| KDC-MP522(K) | UPD703030GC012 | NO | YES | NO | YES | NO | NO | YES | NO | NO | NO | NO | YES | NO | NO | YES | NO | NO | NO |
| KDC-MPV622(K) | UPD703030GC012 | NO | YES | NO | YES | NO | YES | NO | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO |
| KDC-MPV6022(K) | UPD703030GC012 | NO | YES | NO | YES | NO | YES | NO | YES | NO | 9.1K | 1K | NO | YES | YES | NO | NO | NO | YES |
| KDC-MPV7023(M/K) | UPD703030GC012 | NO | YES | NO | YES | NO | YES | NO | YES | NO | 9.1K | 1K | YES | NO | NO | YES | NO | NO | YES |
| KDC-M6024G/GY(E2) | UPD703030GC012 | NO | NO | NO | NO | NO | NO | YES | NO | NO | NO | NO | NO | YES | YES | NO | NO | NO | NO |

(X25-9712-XX)

| MODEL NAME | IC1 | L12 | Q23, 357,358 | R24,57,66,69,365, 373-379,411,416 | | | R412, 417 | W10 | W101- 108 |
|--------------------------------|----------------|-----|-----------------|--------------------------------------|-----|-----|--------------|-----|--------------|
| KDC-M6024/Y(E) KDC-M6024(E) | UPD703030GC012 | NO | NO | NO | NO | YES | YES | YES | NO |
| KDC-6024(E) | UPD703030GC013 | YES | NO | NO | NO | YES | YES | YES | NO |
| KDC-V6524(E) | UPD703030GC013 | YES | NO | NO | YES | NO | YES | YES | NO |

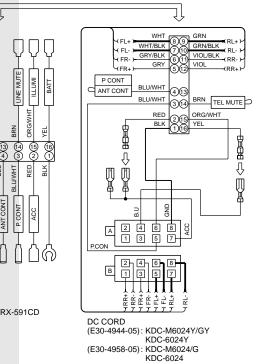
(X25-980X-XX)

| MODEL NAME | IC1 | L12 | Q23 | Q357, 358 | R24 | R57,66,69, 151,156 | R169 | R365, 373 | R374, 375 | R376, 377 | R378, 379 | R411 | R412 | R416 | R417 | R420 | R421 | W10 | W101- 104 | W105- 108 |
|---------------|----------------|-----|-----|--------------|-----|-----------------------|------|--------------|--------------|--------------|--------------|------|------|------|------|------|------|-----|--------------|--------------|
| KDC-X469(K) | UPD703030GC013 | YES | YES | YES | YES | NO | YES | NO | 360 | 22K | 180 | YES | NO | NO | YES | NO | YES | NO | YES | NO |
| KDC-422(K) | UPD703030GC013 | YES | YES | NO | YES | NO | YES | NO | NO | NO | NO | NO | YES | YES | ОИ | NO | YES | NO | NO | NO |
| KDC-4022(K) | UPD703030GC013 | YES | YES | NO | YES | NO | YES | NO | NO | NO | NO | NO | YES | YES | NO | YES | NO | NO | NO | NO |
| KDC-6023(M/K) | UPD703030GC013 | YES | YES | NO | YES | NO | YES | YES | NO | 9.1K | 1K | YES | NO | YES | NO | NO | YES | NO | NO | YES |
| KDC-6024Y(E2) | UPD703030GC013 | YES | NO | NO | NO | NO | YES | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | YES | NO | NO |
| RX-591CD(J) | UPD703030GC013 | YES | YES | NO | YES | YES | NO | NO | NO | NO | NO | YES | NO | NO | YES | NO | YES | NO | NO | NO |

2

4

6

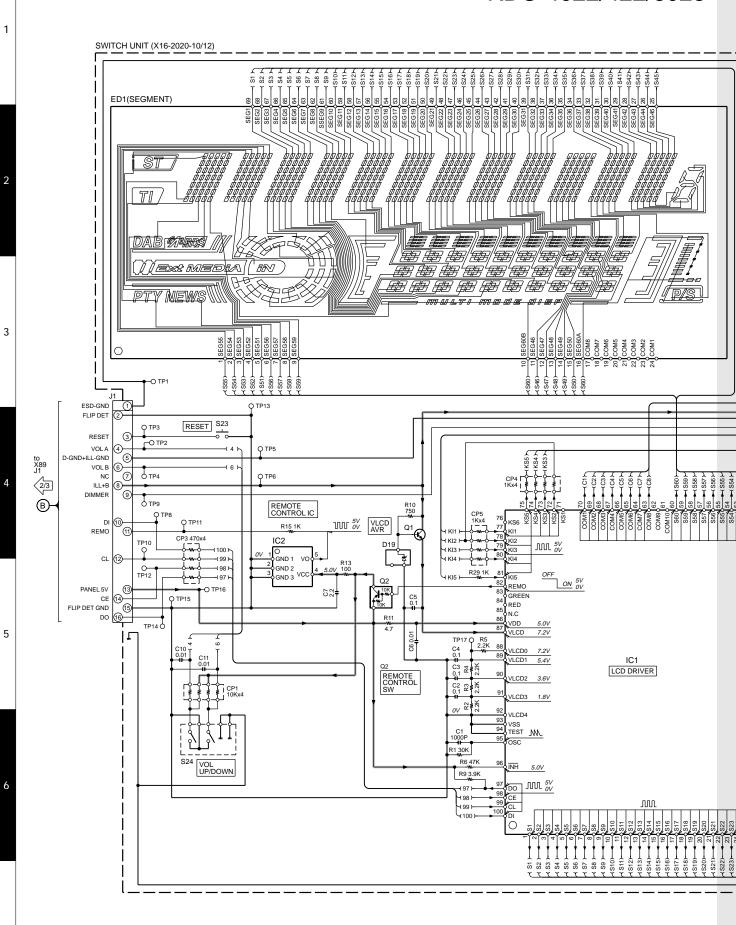


KDC-V6524

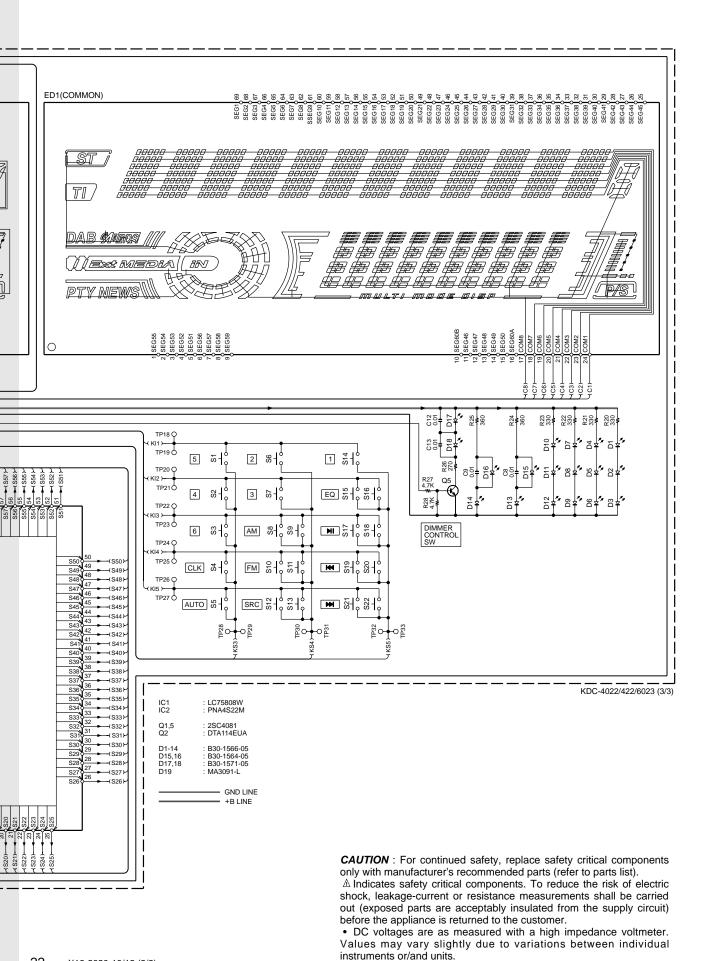
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

 \triangle Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

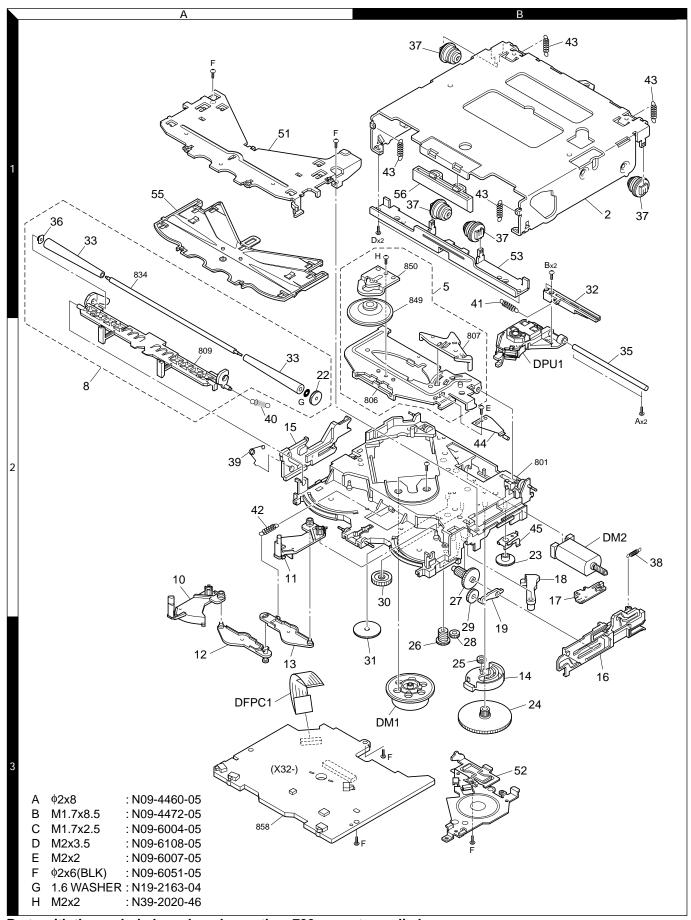
• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.



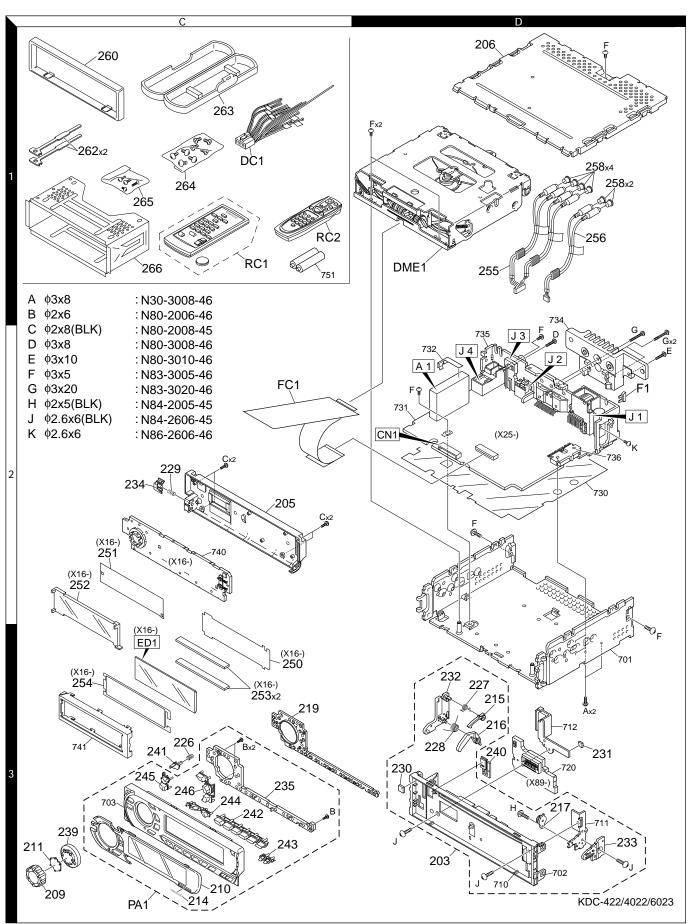
ΑK



EXPLODED VIEW (MECHANISM)



EXPLODED VIEW (UNIT)



* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

| Ref. No. | A d d | N e w | Parts No. | Description | Dest inati on | | | | | |
|---------------------------------|----------------------------|-------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--|--|--|--|--|
| | | | KDC-4022/ | /422/6023 | | | | | | |
| 203 205 206 263 PA1 | 3D 2C 1D 1C 3C | * * | A22-2982-02 A46-1778-01 A52-0829-02 A02-1486-13 A64-2823-02 | SUB PANEL ASSY REAR COVER TOP PLATE PLASTIC CABINET ASSY PANEL ASSY | K3 | | | | | |
| PA1 PA1 RC1 RC2 | 3C 3C 1C 1C | * * | A64-2832-02 A64-2853-02 A70-2026-05 A70-2040-05 | PANEL ASSY PANEL ASSY REMOTE CONTROLLER ASSY(RC-410) REMOTE CONTROLLER ASSY(RC-505) | M K4 M K3K4 | | | | | |
| - - - - | | * | B46-0100-50 B46-0606-04 B46-0612-14 B46-0653-03 B64-2516-00 | WARRANTY CARD ID CARD ID CARD USER CARD INST. MANUAL (ENG,FRE,SPA) | K3K4 M K3K4 K3K4 | | | | | |
| - - 209 210 210 | 3C 3C 3C | * * * * * | B64-2517-00 B64-2518-00 B09-0529-03 B10-4303-01 B10-4309-01 | INST. MANUAL (ENG,T-CHI) INST. MANUAL (ARABIC) CAP FRONT GLASS FRONT GLASS | M M K3 M | | | | | |
| 210 211 214 260 | 3C 3C 3C 1C | * | B10-4326-01 B19-2200-04 B43-1284-04 B07-3022-02 | FRONT GLASS LIGHTING BOARD BADGE ESCUTCHEON | K4 | | | | | |
| 215 216 217 262 | 3D 3D 3D 1C | | D10-4730-03 D10-4731-03 D39-0255-05 D10-4589-04 | LEVER LEVER DAMPER LEVER | | | | | | |
| 219 255 256 DC1 FC1 | 3C 1D 1D 1C 2C | * * * | E29-1927-02 E30-6228-05 E30-6229-05 E30-4940-05 E39-0438-05 | CONDUCTIVE RUBBER CORD WITH PINPLUG CORD WITH PINPLUG DC CORD FLAT CABLE (24PIN) | M K3K4 | | | | | |
| 258 F1 | 1D 2D | | F29-0626-04 F52-0006-05 | INSULATING COVER FUSE(MINI BLADE TYPE : 10A) | | | | | | |
| 226 227 228 229 230 | 3C 3D 3D 2C 3D | * * * * | G01-3129-04 G01-3171-04 G01-3172-04 G01-3173-04 G13-1267-04 | COMPRESSION SPRING TORSION COIL SPRING TORSION COIL SPRING COMPRESSION SPRING CUSHION | | | | | | |
| 231 | 3D | * | G13-1268-04 | CUSHION | | | | | | |
| - - - - | | * | H10-4856-12 H25-0329-04 H25-0337-04 H54-2777-03 H54-2778-03 | POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (280X450X0.03) PROTECTION BAG (180X300X0.03) ITEM CARTON CASE ITEM CARTON CASE | K3 K4 | | | | | |
| - | | * | H54-2785-03 | ITEM CARTON CASE | М | | | | | |
| 232 233 234 235 266 | 3D 3D 2C 3C 1C | * * * * | J19-5203-03 J19-5204-03 J19-5205-03 J19-5206-02 J21-9716-03 | HOLDER HOLDER HOLDER HOLDER MOUNTING HARDWARE ASSY | | | | | | |

| Ref. No. | A d d | N e w | Parts No. | Description | Dest inati on |
|---------------------------------------|----------------------------|-------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------|
| 239 240 241 242 243 | 3C 3D 3C 3C 3C | * * * * * | K23-1072-13 K24-4000-03 K24-4002-04 K25-1521-03 K25-1522-04 | KNOB (VOL) KNOB (EJECT) KNOB (DOOR) KNOB (1-6) KNOB (DISP) | |
| 244 245 246 | 3C 3C 3C | * * | K25-1523-03 K25-1524-03 K25-1525-03 | KNOB (PLAY,STOP) KNOB (FM,AM) KNOB (SRC,SKIP) | |
| 264 265 A B C | 1C 1C 3D 3C 2C | * | N99-1719-05 N99-1730-15 N30-3008-46 N80-2006-46 N80-2008-45 | SCREW SET SCREW SET PAN HEAD MACHINE SCREW PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW | |
| F H J | 2D 3D 3D | | N83-3005-46 N84-2005-45 N84-2606-45 | PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW | |
| - - - - | | * * * * * | X16-2020-10 X16-2020-12 X25-9800-11 X25-9800-12 X25-9800-21 | SWITCH UNIT SWITCH UNIT ELECTRIC UNIT ELECTRIC UNIT ELECTRIC UNIT | M K3K4 K3 K4 M |
| - DME1 | 1D | * | X89-2570-10 X92-4660-00 | DAUGHTER UNIT MECHANISM ASSY (DXM-6060W) | |
| | | S | WITCH UNIT (X | (16-2020-10/12) | |
| 250 251 252 D1 -14 D1 -14 | 3C 2C 2C | * * * | B11-1396-04 B11-1397-04 B19-2199-03 B30-1566-05 B30-1605-05 | OPTICAL DIFFUSER REFLECTION SHEET LIGHTING BOARD LED(1608,RED) LED(2COLOR PG/RED) | K3K4 M |
| D15 ,16 D17 ,18 ED1 | | | B30-1564-05 B30-1571-05 B38-1103-05 | LED(1608,BLUE) LED(WHITE) LIQUID CRYSTAL | |
| C1 C2 -5 C6 C7 C8 -13 | | | CK73GB1H102K CK73GB1C104K CK73GB1H103K CK73FB1A225K CK73GB1H103K | CHIP C 1000PF K CHIP C 0.10UF K CHIP C 0.010UF K CHIP C 2.2UF K CHIP C 0.010UF K | |
| 253 J1 | 3C | | E29-1925-04 E59-0829-05 | CONDUCTIVE RUBBER RECTANGULAR PLUG | |
| 254 | 3C | * | F09-1823-04 | SHEET | |
| CP1 CP3 R1 R2 -5 R6 | | | R90-0714-05 R90-1016-05 RK73GB2A303J RK73GB2A222J RK73GB2A473J | MULTI-COMP 10K X4 MULTI-COMP 470 X4 CHIP R 30K J 1/10W CHIP R 2.2K J 1/10W CHIP R 47K J 1/10W | |
| R9 R10 R11 R13 R15 | | | RK73GB2A392J RK73GB2A751J RK73GB2A4R7J RK73GB2A101J RK73GB2A102J | CHIP R 3.9K J 1/10W CHIP R 750 J 1/10W CHIP R 4.7 J 1/10W CHIP R 100 J 1/10W CHIP R 1.0K J 1/10W | |
| R16 -19 R20 -23 | | | RK73GB2A222J RK73FB2B331J | CHIP R 2.2K J 1/10W CHIP R 330 J 1/8W | М |

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

SWITCH UNIT (X16-2020-10/12)

| Ref. No. | A d d | N e w | Parts No. | Description | Dest inati on | | Ref. No. | A d d | N e w | Parts No. | Description | Dest inati on |
|--------------------------------------------------|-------------|-------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------|---|--------------------------------------------------|----------------------------------|-------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| R24 ,25 R26 R27 ,28 | - | | RK73FB2B361J RK73FB2B271J RK73GB2A472J T99-0446-05 | CHIP R 360 J 1/8V CHIP R 270 J 1/8V CHIP R 4.7K J 1/10 ROTARY ENCODER | v | | C355 C356,357 C358,359 C360 C401-404 | | | CE04NW1A470M CK73GB1H103K CE04NW1HR47M CK73GB1H103K CK73GB1C104K | ELECTRO 47UF 10WV CHIP C 0.010UF K ELECTRO 0.47UF 50WV CHIP C 0.010UF K CHIP C 0.10UF K | M M M |
| D19 IC1 IC2 Q1 Q2 | | | MA3091-L LC75808W PNA4S22M 2SC4081 DTA114EUA | ZENER DIODE MOS-IC ANALOGUE IC TRANSISTOR DIGITAL TRANSISTOR | | | C405 C406 C407 C408 C409 | | | CK73GB0J105K CK73GB1C104K CC73GCH1H220J CC73GCH1H270J CE04CW0J470M | CHIP C 1.0UF K CHIP C 0.10UF K CHIP C 22PF J CHIP C 27PF J ELECTRO 47UF 6.3WV | |
| Q3 -5 Q5 | | | 2SC4081 2SC4081 | TRANSISTOR TRANSISTOR | M K3K4 | | C500 C501,502 | | | CK73FB1A225K CK73GB1H103K | CHIP C 2.2UF K CHIP C 0.010UF K | |
| | I | ELE | ECTRIC UNIT (X | 25-9800-11/12/21) | | | C503 | | | CK73GB1H472K | CHIP C 4700PF K | |
| C1 C2 C3 C4 -6 C20 | | | C90-5242-05 CK73GB1H103K CK73GB1H102K CK73GB1H103K C90-2962-05 | ELECTRO 3300UF 16WV CHIP C 0.010UF K CHIP C 1000PF K CHIP C 0.010UF K ELECTRO 100UF 16WV ELECTRO 100UF 10WV | | | CN1 CN2 CN3 CN4 J1 | | | E41-0167-05 E41-0168-05 E40-3238-05 E40-3241-05 E58-0863-15 | PIN ASSY (18PIN) FLAT CABLE CONNECTOR (24PIN) PIN ASSY (3PIN) PIN ASSY (6PIN) RECTANGULAR RECEPTACLE CYLINDRICAL RECEPTACLE | K3K4 M |
| C22 ,23 C24 ,25 C26 C27 | | | CE04NW1E100M CE04NW1C100M CE04NW1E100M CE04CW1H100M | ELECTRO 10UF 25WV ELECTRO 10UF 16WV ELECTRO 10UF 25WV ELECTRO 10UF 50WV | | | J3 J4 P1 W1 -9 | | | E63-0887-05 E04-0312-05 E23-0745-05 E31-0001-00 | PIN JACK RF COAXIAL CABLE RECEPTACLE TERMINAL JUMPER WIRE | |
| C28 C29 C32 C33 C34 | | | C90-2980-05 CE04NW1C100M CK73GB1E223K CE04NW1H010M CK73GB1H103K | ELECTRO 220UF 16WV ELECTRO 10UF 16WV CHIP C 0.022UF K ELECTRO 1.0UF 50WV CHIP C 0.010UF K | | | W11 W16 -27 W29 -34 L1 L2 | | | E31-0001-00 E31-0001-00 E31-0001-00 L33-1170-05 L33-1926-05 | JUMPER WIRE JUMPER WIRE JUMPER WIRE CHOKE COIL ASSY CHOKE COIL | |
| C51 ,52 C111 C119 C163 C201,202 | | | CK73GB1H103K CK73GB1H102K CK73GB1H103K CK73GB1A224K CE04NW1HR47M | CHIP C 0.010UF K CHIP C 1000PF K CHIP C 0.010UF K CHIP C 0.22UF K ELECTRO 0.47UF 50WV | | | L3 L6 -8 L10 ,11 | | | L33-1123-05 L40-4795-91 L40-4795-91 L78-0821-05 | LINE FILTER COIL SMALL FIXED INDUCTOR(4.7UH,J) SMALL FIXED INDUCTOR(4.7UH,J) RESONATOR (20MHz) | |
| C203 C204 C205 C206 C207,208 | | | CK73GB1H223K CK73GB1H103K CK73GB1A474K CC73GCH1H151J CE04NW1H010M | CHIP C 0.022UF K CHIP C 0.010UF K CHIP C 0.47UF K CHIP C 150PF J ELECTRO 1.0UF 50WV | K4M | | X2 D E F G K | 2D 2D 2D 2D 2D 2D | | L77-2738-05 N80-3008-46 N80-3010-46 N83-3005-46 N83-3020-46 N86-2606-46 | PAN HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW | |
| C209 C210 C211 C212,213 C214,215 | | | CE04NW1H2R2M CK73GB1H103K CE04NW1A470M CK73GB1C104K CK73GB1H103K | ELECTRO 2.2UF 50WV CHIP C 0.010UF K ELECTRO 47UF 10WV CHIP C 0.10UF K CHIP C 0.010UF K | | | R1 R2 R3 R4 R5 ,6 | | | RK73GB2A823J RK73GB2A363J RK73GB2A104J RK73FB2B203J RK73GB2A103J | CHIP R 82K J 1/10W CHIP R 36K J 1/10W CHIP R 100K J 1/10W CHIP R 20K J 1/8W CHIP R 10K J 1/10W | |
| C216,217 C218-221 C251-254 C255 C256 | | | CE04NW1H010M CE04NW1H0R1M C90-5296-05 CE04NW1HR47M CE04NW1C220M CK73GB1C104K | ELECTRO | | | R7 R8 R9 R10 R11 | | | RK73GB2A223J RD14DB2H332J RD14BB2C333J RK73GB2A223J RK73GB2A104J | CHIP R 22K J 1/10W SMALL-RD 3.3K J 1/2W RD 33K J 1/6W CHIP R 22K J 1/10W CHIP R 100K J 1/10W | |
| C257 C258 C301,302 C303 C304 | | | CE04NW1H010M CE04NW1HR47M CE04NW1A470M CK73GB1H103K | ELECTRO 1.0UF 50WV ELECTRO 0.47UF 50WV ELECTRO 47UF 10WV CHIP C 0.010UF K | | | R12 R13 R21 R22 ,23 R24 -28 | | | RK73GB2A473J RK73GB2A562J RK73FB2B152J RD14BB2C472J RK73GB2A103J | CHIP R 47K J 1/10W CHIP R 5.6K J 1/10W CHIP R 1.5K J 1/8W RD 4.7K J 1/6W CHIP R 10K J 1/10W | |
| C351-354 (3: KDC-422 | | K | CE04NW1C100M 4: KDC-4022 | ELECTRO 10UF 16WV M: KDC-6023 | |] | | | | | | |

* New Parts

Parts without **Parts No.** are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

FI FCTRIC LINIT (¥25-9800-11/12/21)

| relie offile r | | | o. werden nicht ge | TIETETT. | | | | | | | | TRIC UNI | 1 (XZO | | |
|-----------------------|-------------|-------------|------------------------------|------------------|--------------|--------------------|---------------------|----------------------|--------|-------------|------------------------------|------------------|--------------|-------------------|----------------|
| Ref. No. | A d d | N e w | Parts No. | | Descript | tion | Dest inati on | Ref. No. | d d | N e w | Parts No. | | Descripti | on | Dest inati on |
| R32 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | | R351,352 | | | RK73GB2A361J | CHIP R | 360 | J 1/10W | / |
| R34 | | | RK73EB2E103J | CHIP R | 10K | J 1/4W | | R355,356 | | | RK73GB2A223J | CHIP R | 22K | J 1/10W | |
| R35 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | | R357,358 | | | RK73EB2E181J | CHIP R | 180 | J 1/4W | |
| R36 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | R359,360 | | | RK73GB2A361J | CHIP R | 360 | J 1/10W | , |
| R51 ,52 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | R361,362 | | | RK73GB2A223J | CHIP R | 22K | J 1/10W | 1 |
| DE2 F/ | | | DK72CD241021 | CLUD D | 1.01/ | 1 1/10/1/ | | D2/2.2/4 | | | DV725D25101 I | CLIID D | 100 | 1 1/4/4/ | |
| R53 -56 | | | RK73GB2A102J | CHIP R CHIP R | 1.0K 2.2K | J 1/10W J 1/10W | | R363,364 | | | RK73EB2E181J RK73FB2B4R7J | CHIP R CHIP R | 180 4.7 | J 1/4W | l _M |
| R57 ,58 R59 | | | RK73GB2A222J RK73GB2A101J | CHIP R | 100 | J 1/10W | | R365 R373 | | | RK73FB2B4R7J RK73GB2A102J | CHIP R | 4.7 1.0K | J 1/8W J 1/10W | |
| R60 | | | RK73GB2A1013 | CHIP R | 2.2K | J 1/10W | | R376,377 | | | RK73GB2A102J | CHIP R | 9.1K | J 1/10W | |
| R61,62 | | | RK73GB2A222J | CHIP R | 2.2K 100K | J 1/10W | | R378,377 | | | RK73GB2A912J | CHIP R | 9.1K 1.0K | J 1/10W | M |
| K01,02 | | | KK/3GBZA1043 | CHIPK | TOOK | J 1/1000 | | K3/0,3/9 | | | KK/3FDZD1UZJ | CHIPK | 1.0K | J 1/0VV | IVI |
| R63 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | R401-408 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | |
| R64,65 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | | R409 | | | RK73GB2A153J | CHIP R | 15K | J 1/10V | |
| R67 ,68 | | | RK73GB2A471J | CHIP R | 470 | J 1/10W | | R410 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | |
| R101 | | | RK73GB2A102J | CHIP R | 1.0K | J 1/10W | | R410,411 | | | RK73GB2A104J | CHIP R | 100K | J 1/10V | |
| R102 | | | RK73GB2A471J | CHIP R | 470 | J 1/10W | | R412 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | K3K4 |
| R103 | | | RK73GB2A472J | CHIP R | 4.7K | J 1/10W | | R415,416 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | |
| R104 | | | RK73GB2A471J | CHIP R | 470 | J 1/10W | | R419 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | K3M |
| R105 | | | RK73GB2A472J | CHIP R | 4.7K | J 1/10W | | R419,420 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | / K4 |
| R106 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | R421 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | K3M |
| R152 | | | RK73GB2A102J | CHIP R | 1.0K | J 1/10W | | R422 | | | RK73GB2A103J | CHIP R | 10K | J 1/10W | ' |
| R153 | | | RK73GB2A471J | CHIP R | 470 | J 1/10W | | W105-108 | | | R92-1252-05 | CHIP R | 0 OHM | J 1/16W | / M |
| R154 | | | RK73GB2A102J | CHIP R | 1.0K | J 1/10W | | | | | | | | | |
| R155 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | S1 | | | S74-0821-05 | MICRO SW | /ITCH | | |
| R157,158 | | | RK73GB2A471J | CHIP R | 470 | J 1/10W | | | | | | | | | |
| R159 | | | RK73GB2A102J | CHIP R | 1.0K | J 1/10W | | D1 | | | 1N5393G-M6 | DIODE | | | |
| | | | | | | | | D2 -4 | | | MA4068(N)-M | ZENER DIC | | | |
| R160 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | D21 | | | MA4082(N)-L | ZENER DIC |)DE | | |
| R161 | | | RK73GB2A225J | CHIP R | 2.2M | J 1/10W | | D22 -25 | | | AM01Z | DIODE | | | |
| R162,163 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | | D26 | | | DAN202U | DIODE | | | |
| R164,165 | | | RK73GB2A473J | CHIP R | 47K | J 1/10W | | | | | | | | | |
| R166 | | | RK73GB2A472J | CHIP R | 4.7K | J 1/10W | | D26 | | | MA142WK | DIODE | | | |
| | | | | | | | | D151-155 | | | DA204K | DIODE | | | |
| R167 | | | RK73GB2A474J | CHIP R | 470K | J 1/10W | | D151-155 | | | KDS226 | DIODE | | | |
| R168,169 | | | RK73GB2A102J | CHIP R | 1.0K | J 1/10W | | D157-162 | | | DA204K | DIODE | | | |
| R185,186 | | | RK73GB2A474J | CHIP R | 470K | J 1/10W | | D157-162 | | | KDS226 | DIODE | | | |
| R187 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | 5446 | | | | 751155 510 | | | |
| R188 | | | RK73GB2A473J | CHIP R | 47K | J 1/10W | | D163 D164 | | | MA4062-L MA4120-L | ZENER DIC | | | |
| R201 | | | RK73GB2A103J | CHIP R | 10K | J 1/10W | | D165 | | | MA4062-L | ZENER DIC | | | |
| R202-204 | | | RK73GB2A472J | CHIP R | 4.7K | J 1/10W | | D166 | | | DA204U | DIODE | | | |
| R205 | | | RK73GB2A222J | CHIP R | 2.2K | J 1/10W | | D201,202 | | | RD6.8M(B2) | ZENER DIC | DE | | |
| R206-208 | | | RK73GB2A102J | CHIP R | 1.0K | J 1/10W | | | | | , , | | | | |
| R209,210 | | | RK73GB2A103J | CHIP R | 10K | J 1/10W | | D203-205 | | | DAP202U | DIODE | | | |
| D044.040 | | | DIV700D0 A CCC : | 01115.5 | 0014 | 1 4 4 0 1 1 | | D203-205 | | | MA142WA | DIODE | | | |
| R211,212 | | | RK73GB2A333J | CHIP R | 33K | J 1/10W | | D251-258 | | | AM01Z | DIODE | | | |
| R251 | | | RK73GB2A103J | CHIP R | 10K | J 1/10W | | D269-271 | | | 1SS133 | DIODE | | | |
| R252,253 | | | RK73GB2A473J | CHIP R | 47K | J 1/10W | | D301 | | | MA4062-L | ZENER DIC | DDF | | |
| R254 | | | RK73GB2A152J | CHIP R | 1.5K | J 1/10W | | D000 004 | | | | 7ENED DIO | .D.E | | |
| R255 | | | RK73GB2A101J | CHIP R | 100 | J 1/10W | | D303,304 D307,308 | | | MA4062-L MA4062-L | ZENER DIC | | | |
| R256 | | | RK73GB2A103J | CHIP R | 10K | J 1/10W | | D309-311 | | | MA4068(N)-M | ZENER DIC | | | 1 |
| R257 | | | RK73GB2A153J | CHIP R | 15K | J 1/10W | | D356 | | | MA4062-L | ZENER DIC | | | М |
| R259-262 | | | RK73GB2A223J | CHIP R | 22K | J 1/10W | | D357,358 | | | MA4068(N)-M | ZENER DIC | | | M |
| R301,302 | | | RK73EB2E100J | CHIP R | 10 | J 1/4W | | | | | | | | | |
| R303 | | | RK73EB2E101J | CHIP R | 100 | J 1/4W | | D359 | | | DA204U | DIODE | | | M |
| D004 005 | | | DIVIOEDOS : 30 : | 0.115.5 | 4 | 1 4 4 4 4 4 4 | | D401 | | | 1SS133 | DIODE | | | |
| R304,305 | | | RK73EB2E472J | CHIP R | 4.7K | J 1/4W | | IC1 | | * | UPD703030GC013 | | | | |
| R306 | | | RK73EB2E4R7J | CHIP R | 4.7 | J 1/4W | | IC2 | | * | TDA7411 | ANALOGUE | | | |
| R307-309 | | | RK73EB2E472J | CHIP R | 4.7K | J 1/4W | | IC3 | | | BA4911-V4 | ANALOGUE | : IC | | |
| R310,311 | | | RK73EB2E101J | CHIP R | 100 | J 1/4W | | 1.04 | | | T400701: | | - 10 | | |
| R312-315 | | | RK73GB2A104J | CHIP R | 100K | J 1/10W | | IC4 | | | TA8273H | ANALOGUE | - IC | | |
| (3 : KDC-422 | | | 4: KDC-4022 | M: KDC-60 | 123 | | | | | | • | | | | |

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

ELECTRIC UNIT (X25-9800-11/12/21)

| Ref. No. | рρ≽ | N e w | Parts No. | Description | Dest inati on | Ref. No. | A d d | N e w | Parts No. | Description | Dest inati on |
|--------------------------------------|-----|-------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------|-----------------------------------------|-------------|-------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------|
| IC6 IC8 Q1 -3 Q4 Q21 | 8 | * | HD74HC27FP PST3436UL 2SC4081 2SA1036K 2SD2375 | MOS-IC MOS-IC TRANSISTOR TRANSISTOR TRANSISTOR | | C40 C41 C42 C43 C44 | <u> </u> | | CK73GB1H153K CK73GB1H102K CK73GB1E473K CK73GB1H222K CK73GB1H102K | CHIP C 0.015UF K CHIP C 1000PF K CHIP C 0.047UF K CHIP C 2200PF K CHIP C 1000PF K | |
| Q22 ,23 Q31 Q31 Q31 Q151 | | | UMC2N DTC144EUA KRC404 UN5213 DTA114YUA | TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR | | C45 -47 C48 C49 C50 C51 | | | CK73GB1C104K CK73GB1H682K CK73GB1H152K CK73GB1H682K CK73GB1H152K | CHIP C 0.10UF K CHIP C 6800PF K CHIP C 1500PF K CHIP C 6800PF K CHIP C 1500PF K | |
| Q151 Q151 Q152 Q153 Q153 | | | KRA307 UN5114 2SA1576A DTC144EUA KRC404 | DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR | | C52 C61 C62 C71 ,72 C73 ,74 | | | CK73GB1C104K CK73FB1A225K CK73GB1C104K CK73GB1H471K CC73GCH1H680J | CHIP C 0.10UF K CHIP C 2.2UF K CHIP C 0.10UF K CHIP C 470PF K CHIP C 68PF J | |
| Q153 Q154 Q201 Q201 | | | UN5213 2SA1577 DTC143TUA KRC410 | DIGITAL TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR | | C75 ,76 C77 ,78 C100-102 | | | CK73GB1H222K CK73GB1C104K CK73GB1H102K | CHIP C 2200PF K CHIP C 0.10UF K CHIP C 1000PF K | |
| Q201 Q350 Q350 Q350 | | | UN5216 DTA124EUA KRA303 UN5112 | DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR | | CN1 CN1 CN2 CN2 | | | E40-9536-05 E41-0193-05 E40-9527-05 E41-0213-05 | FLAT CABLE CONNECTOR (16PIN) FLAT CABLE CONNECTOR (16PIN) FLAT CABLE CONNECTOR (24PIN) FLAT CABLE CONNECTOR (24PIN) | |
| Q351,352 Q351,352 | | | DTC143TUA KRC410 | DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR | | | | * | J74-1486-12 | RIGID PRINTED WIRING BOARD | |
| Q351,352 | | | UN5216 | DIGITAL TRANSISTOR | | X1 | | | L78-0851-05 | RESONATOR (16.93MHZ) | |
| Q354 Q354 Q354 Q355,356 | | | DTA124EUA KRA303 UN5112 DTC143TUA | DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR | | CP1 CP2 CP3 CP4 CP5 | | | R90-1019-05 R90-1014-05 R90-0974-05 R90-0718-05 R90-0720-05 | MULTI-COMP 100 X2 MULTI-COMP 100 X4 MULT R 1.8KX4 MULTI-COMP 4.7K X4 MULTI-COMP 100K X4 | |
| Q355,356 Q355,356 TH1 | | | KRC410 UN5216 PTH9C42BE471Q | DIGITAL TRANSISTOR DIGITAL TRANSISTOR POSITIVE RESISTOR | | R1 R2 ,3 R4 | | | RK73GB2A910J RK73GB2A562J RK73FB2B100J | CHIP R 91 J 1/10W CHIP R 5.6K J 1/10W CHIP R 10 J 1/8W | |
| A1 | | * | X86-3720-11 | FRONT-END UNIT | | R5 ,6 R7 | | | RK73GB2A332J RK73GB2A362J | CHIP R 3.3K J 1/10W CHIP R 3.6K J 1/10W | |
| 04 | | С | | T (X32-5400-00) | | | | | | | |
| C1 C2 C3 C5 C6 | | | C92-0566-05 CK73FB1A225K CK73GB0J105K CC73GCH1H020C CC73GCH1H390J | CHIP-TAN 10UF 6.3WV CHIP C 2.2UF K CHIP C 1.0UF K CHIP C 2.0PF C CHIP C 39PF J | | R8 R9 R10 R11 R12 | | | RK73GB2A273J RK73GB2A392J RK73GB2A104J RK73GB2A333J RK73GB2A244J | CHIP R 27K J 1/10W CHIP R 3.9K J 1/10W CHIP R 100K J 1/10W CHIP R 33K J 1/10W CHIP R 240K J 1/10W | , |
| C7 C8 C9 C10 C11 | | | CK73GB1C104K CK73GB0J105K CK73GB1H472K CK73GB1C333K CK73GB1H682K | CHIP C 0.10UF K CHIP C 1.0UF K CHIP C 4700PF K CHIP C 0.033UF K CHIP C 6800PF K | | R13 R14 R15 R31 R32 | | | RK73GB2A914J RK73GB2A104J RK73GB2A472J RK73GB2A273J RK73GB2A103J | CHIP R 910K J 1/10W CHIP R 100K J 1/10W CHIP R 4.7K J 1/10W CHIP R 27K J 1/10W CHIP R 10K J 1/10W | |
| C12 C13 C14 C15 C16 | | | CK73GB1H332K CC73GCH1H271J CK73GB1H472K CK73GB1H222K CC73GCH1H331J | CHIP C 3300PF K CHIP C 270PF J CHIP C 4700PF K CHIP C 2200PF K CHIP C 330PF J | | R33 R34 R35 R36 R37 | | | RK73GB2A183J RK73GB2A103J RK73GB2A393J RK73GB2A103J RK73GB2A622J | CHIP R 18K J 1/10W CHIP R 10K J 1/10W CHIP R 39K J 1/10W CHIP R 10K J 1/10W CHIP R 6.2K J 1/10W | |
| C17 ,18 C31 -34 C36 C37 -39 | | | CK73GB1C104K CK73GB1C104K CK73FB1A225K CK73GB1H103K | CHIP C 0.10UF K CHIP C 0.10UF K CHIP C 2.2UF K CHIP C 0.010UF K | | R38 R39 R40 R41 | | | RK73GB2A224J RK73GB2A104J RK73GB2A821J RK73GB2A473J | CHIP R 220K J 1/10W CHIP R 100K J 1/10W CHIP R 820 J 1/10W CHIP R 47K J 1/10W | , |

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

CD PLAYER UNIT (X32-5400-00)

| | d d | e W | Parts No. | Description | Dest inati on |
|---------------------------------------------|--------|--------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------|
| R42 R43 R44 ,45 R46 R47 | | | RK73GB2A472J RK73GB2A102J RK73GB2A103J RK73GB2A273J RK73GB2A222J | CHIP R 4.7K J 1/10W CHIP R 1.0K J 1/10W CHIP R 10K J 1/10W CHIP R 27K J 1/10W CHIP R 2.2K J 1/10W | |
| R48 R49 R50 R51 R52 ,53 | | | RK73GB2A103J RK73GB2A393J RK73GB2A392J RK73GB2A103J RK73GB2A472J | CHIP R 10K J 1/10W CHIP R 39K J 1/10W CHIP R 3.9K J 1/10W CHIP R 10K J 1/10W CHIP R 4.7K J 1/10W | |
| R71 R72 R81 -86 R87 ,88 R89 ,90 | | | RK73GB2A133J RK73FB2B201J RK73FB2B203J RK73FB2B331J RK73GB2A332J | CHIP R 13K J 1/10W CHIP R 200 J 1/8W CHIP R 20K J 1/8W CHIP R 330 J 1/8W CHIP R 3.3K J 1/10W | |
| R91 ,92 R100 | | | RK73GB2A562J RK73GB2A100J | CHIP R 5.6K J 1/10W CHIP R 10 J 1/10W | |
| S1 ,2 S3 | | | S68-0863-05 S68-0862-05 | PUSH SWITCH PUSH SWITCH | |
| D1 D1 D2 D3 IC1 | | | DAN202U MA142WK MA8051-L DA204U AN22002AA | DIODE DIODE ZENER DIODE DIODE ANALOGUE IC | |
| IC2 IC3 IC4 Q1 Q2 | | | MN6627771KP BA5824FP NJM4580M1 MCH6101 2SA1362(Y) | MOS-IC ANALOGUE IC ANALOGUE IC TRANSISTOR TRANSISTOR | |
| Q3 Q3 Q4 Q5 Q6 | | | DTC124EUA UN5212 DTA143XUA 2SC4081 2SA1576A | DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR | |
| | | D | AUGHTER UNIT | Г (Х89-2570-10) | |
| D1 | | | B30-1566-05 | LED(1608,RED) | |
| C1 | | | CK73GB1H103K | CHIP C 0.010UF K | |
| CN1 J1 | | | E41-0169-05 E58-0865-05 | SOCKET FOR PIN ASSY (18PIN) RECTANGULAR RECEPTACLE (16PIN) | |
| R1 R2 -5 R6 ,7 R8 R9 ,10 | | | RK73EB2E102J RK73EB2E471J RK73EB2E102J RK73EB2E241J RK73EB2E471J | CHIP R 1.0K J 1/4W CHIP R 470 J 1/4W CHIP R 1.0K J 1/4W CHIP R 240 J 1/4W CHIP R 470 J 1/4W | |
| R11 -13 | | | RK73EB2E102J | CHIP R 1.0K J 1/4W | |
| S1 | | | S70-0871-05 | TACT SWITCH | |
| | | ME | ECHANISM ASS | SY (X92-4660-00) | |
| 2 | 1B | | A10-4827-12 | CHASSIS | |
| | | | D10-4576-33 | ARM ASSY | |

| Ref. No. | A d | N e | Parts No. | Description | Dest |
|----------------------------|----------------------------|--------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------|
| 10 | d 3A | w | D10-4581-13 | ARM | on |
| 11 | 2A | | D10-4582-13 | ARM | |
| 12 13 14 15 | 3A 3A 2A 2A 3B | | D10-4583-03 D10-4584-03 D10-4585-03 D10-4586-13 D10-4587-22 | ARM ARM ARM SLIDER SLIDER | |
| 17 18 19 22 23 | 3B 3B 3B 2A 2B | | D10-4588-03 D10-4595-04 D10-4596-14 D13-2151-04 D13-2152-04 | SLIDER ARM ARM GEAR GEAR | |
| 24 25 26 27 28 | 3B 3B 3B 3B 3B | | D13-2153-04 D13-2154-04 D13-2155-04 D13-2156-14 D13-2157-04 | GEAR GEAR WORM GEAR GEAR | |
| 29 30 31 32 33 | 3B 3B 3B 3B 2B | | D13-2158-04 D13-2168-04 D13-2171-04 D13-2172-03 D14-0759-04 | GEAR GEAR GEAR RACK (GEAR) ROLLER | |
| 35 36 37 | 2B 1A 1B | | D21-2382-04 D23-0954-04 D39-0246-05 | SHAFT RETAINER DAMPER | |
| 38 39 40 41 42 | 2B 2A 2A 2B 2A | | G01-3072-04 G01-3073-04 G01-3074-04 G01-3075-04 G01-3076-04 | EXTENSION SPRING TORSION COIL SPRING EXTENSION SPRING EXTENSION SPRING EXTENSION SPRING | |
| 43 44 45 | 1B 2B 2B | | G01-3077-04 G02-1399-04 G02-1408-04 | EXTENSION SPRING FLAT SPRING FLAT SPRING | |
| 51 52 53 55 56 | 1A 3B 1B 1A 1B | | J21-9676-22 J21-9677-02 J21-9678-03 J90-1001-11 J90-1023-03 | MOUNTING HARDWARE MOUNTING HARDWARE MOUNTING HARDWARE GUIDE GUIDE | |
| DFPC1 | 2B | | J84-0141-05 | FLEXIBLE PRINTED WIRING BOARD | |
| A B C D | 2B 1B 2B 1B 2B | | N09-4460-05 N09-4472-05 N09-6004-05 N09-6108-05 N09-6007-05 | TAPTITE SCREW (OVAL P TAPTIT) MACHINE SCREW (M1.7X8.5) MACHINE SCREW (M1.7X2.5 IB-L) MACHINE SCREW (M2*3.5TYPE3) MACHINE SCREW (PAN M2X2) | |
| F G H | 1A 2A 1B | | N09-6051-05 N19-2163-04 N39-2020-46 | TAPTITE SCREW (BIND P 2X5) FLAT WASHER PAN HEAD MACHIN SCREW | |
| DM1 DM2 | 3B 2B | | T42-1066-04 T42-1067-04 | DC MOTOR ASSY (SPINDOL) DC MOTOR ASSY (LOADING) | |
| - DPU1 | 3A 2B | | X32-5400-00 X93-2010-00 | CD PLAYER UNIT OPTICAL PICKUP ASSY | |

KDC-4022/422/6023 **SPECIFICATIONS**

| | KDC-422/4022 (K type) | KDC-6023 (M type) | | |
|----------------------------------|---------------------------------|-------------------------------------------------------|--|--|
| FM tuner section | | | | |
| Frequency range (Frequency step) | 87.9MHz~107.9MHz (200kHz) - | 87.9MHz~107.9MHz (200kHz) 87.5MHz-108.0MHz (50kHz) | | |
| Channel space selection | 50kHz/100kHz | 50kHz/100kHz | | |
| Usable sensitivity (S/N 30dB) | 9.3dBf (0.8μV/75Ω) | 9.3dBf (0.8μV/75Ω) | | |
| Quieting sensitivity (S/N 50dB) | 15.2dBf (1.6μV/75Ω) | 15.2dBf (1.6μV/75Ω) | | |
| Frequency response (±3.0dB) | 30Hz~15kHz | 30Hz-15kHz | | |
| S/N (MONO) | 70dB | 70dB | | |
| Selectivity | ≥80dB (±400kHz) | ≥80dB (±400kHz) | | |
| Stereo separation (1kHz) | 40dB (1kHz) | 40dB | | |
| AM tuner section | · | | | |
| Frequency range (Frequency step) | 530kHz~1700kHz (10kHz) | 530kHz~1700kHz (10kHz) 531kHz-1611kHz (9kHz) | | |
| Channel space selection | 9kHz/10kHz | 9kHz/10kHz | | |
| Usable sensitivity (S/N 20dB) | 28dBμ (25μV) | 28dBμ (25μV) | | |
| CD section | 280Βμ (23μν) | 2ουΒμ (2ομν) | | |
| Laser diode | GaAlAs (λ=780nm) | GaAlAs (λ=780nm) | | |
| Digital filter (D/A) | 8 Times Over Sampling | 8 Times Over Sampling | | |
| D/A converter | 1 Bit | 1 Bit | | |
| Spindle speed | 500rpm~200rpm (CLV) | 500rpm~200rpm (CLV) | | |
| Wow & Flutter | Below measurable limit | Below measurable limit | | |
| Frequency response | 10Hz~20kHz (±1dB) | 10Hz~20kHz (±1dB) | | |
| T.H.D. | 0.01% (1kHz) | 0.01% (1kHz) | | |
| S/N (1kHz) | 105dB | 105dB | | |
| Dynamic range | 93dB | 93dB | | |
| Channel separation | 96dB | 96dB | | |
| Audio section | 3000 | 9005 | | |
| Preout level/Load | 2.0V/10kΩ (CD-CH) | 2.0V/10kΩ (CD-CH) | | |
| Preout impedance | ≤600Ω | ≤600Ω | | |
| Maximum power | 50Wx4 | 50Wx4 | | |
| Full bandwidth power | 22Wx4 (at less than 1%THD) | 22Wx4 (at less than 1%THD) | | |
| TONE section | 227774 (dt 1035 tháir 17611115) | 22VVA+ (at 1000 than 170111D) | | |
| Bass | 100Hz ±10dB | 100Hz±10dB | | |
| Middle | 1kHz ±10dB | 1kHz ±10dB | | |
| Treble | 10kHz +10dB | 10kHz+10dB | | |
| General | TOTALE ETOOD | 10111221005 | | |
| Operating voltage | 14.4V (11V~16V allowable) | 14.4V (11V~16V allowable) | | |
| Current consumption | 10A | 10A | | |
| • | 182x53x155 (mm) | 182x53x155 (mm) | | |
| Installation size (WxHxD) | 7 -3/16 x 2-1/16 x 6-1/10(inch) | 7 -3/16 x 2-1/16 x 6-1/10(inch) | | |
| Weight | 1.20kg (2.64lbs) | 1.20kg (2.64lbs) | | |

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

KENWOOD CORPORATION 2967-3, Ishikawa-machi, Hachioji-shi, Tokyo 192-8525, Japan

KENWOOD USA CORPORATION P.O. BOX 22745, 2201 East Dominguez Street, Long Beach, CA90801-5745, U.S.A.

KENWOOD ELECTRONICS CANADA INC. 6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD ELECTRONICS LATIN AMERICA S.A. P.O. Box 55-2791 Paitilla, Plaza Credicorp Bank Panama, Piso 9, Oficina 901, Calle 50, Panama, Rep. de Panama

KENWOOD ELECTRONICS BRASIL LTDA. Alameda Ministro Rocha Azevedo No. 456, Edificio Jaú, 10o Andar, Cerqueira César, Cep 0140-001, São Paulo-SP-Brasil

KENWOOD ELECTRONICS UK LIMITED Kenwood House, Dwight Road, Watford, Herts, WD18 9EB, United Kingdom

KENWOOD ELECTRONICS DEUTSCHLAND GMBH Rembrücker-Str. 15, 63150 Heusenstamm, Germany

KENWOOD ELECTRONICS FRANCE S.A.

KENWOOD ELECTRONICS BELGIUM N.V.

13, Boulevard Ney, 75018 Paris, France

KENWOOD ELECTRONICS ITALIA S.p.A. Via G. Sirtori 7/9, 20129 Milano, Italy

KENWOOD IBÉRICA S.A.

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (A.C.N. 001 499 074) 16 Giffnock Avenue, Centrecourt Estate, North Ryde, N.S.W. 2113, Australia

KENWOOD ELECTRONICS (HONG KONG) LTD. Unit 3712-3724, Level 37, Tower 1, Metroplaza, 223 Hing Fong Road, Kwai Fong, N.T., Hong Kong

KENWOOD ELECTRONICS GULF FZE P.O. Box 61318, Jebel Ali, Dubai, U.A.E.

KENWOOD ELECTRONICS (THAILAND) CO., LTD. 2019 New Pechburi Road, Bangkapi, Huaykwang, Bangkok, 10320 Thailand

KENWOOD ELECTRONICS SINGAPORE PTE. LTD. 1 Genting Lane, #07-00, Kenwood Building, Singapore, 349544

KENWOOD ELECTRONICS (MALAYSIA) SDN BHD #4.01 Level 4, Wisma Academy Lot 4A, Jalan 19/1, 46300 Petaling Jaya, Selangor Darul Ehsan,